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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,695

06/27/2006

Howard Elliott

85328-88014

7165

22807

7590

12/10/2007

GREENSFELDER HEMKER & GALE PC

SUITE 2000

10 SOUTH BROADWAY

ST LOUIS, MO 63102

EXAMINER

NGUYEN, VINCENT Q

ART UNIT

PAPER NUMBER

2858

MAIL DATE

DELIVERY MODE

12/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/573,695

Applicant(s)

ELLIOTT, HOWARD

Examiner

Vincent Q. Nguyen

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE10/31/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 10, 11, 14, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence et al. (5,760,593) in view of Drewes et al. (6,374,680).

With respect to claims 1-4, Lawrence et al. discloses a sensor (1) for capacitively measuring the distance to a stationary or passing object comprising an electrode (4) for capacitively coupling with the object, a shield (8, 10) that surrounds the electrode (1) and is electrically isolated from the electrode (1) by an insulating layer (16), and a housing (2) that substantially surrounds the electrode (1) and the shield (8, 10), wherein the electrode (1) and the shield (8, 10) are formed from an electrically conductive ceramic material and the insulating layer (16) and the housing (2) are formed entirely from an electrically non-conductive ceramic material, and in that the electrically conductive and electrically non-conductive ceramic materials are selected to have substantially similar thermal expansion coefficients (Col. 3 lines 25-61).

Lawrence et al. does not disclose the sensor assembly is formed entirely ceramic materials such that the sensor assembly remains virtually stress free at high operating temperature.

Drewes et al. discloses a capacitive sensor (Figures 1-4) and further discloses sensor is formed entirely ceramic materials (Drewes et al.'s column 6 lines 9-59) that the sensor assembly remains virtually stress free at high operating temperature for the purpose of enhancing the drifting in capacitive sensor (It is inherent that the materials have the same thermal coefficient (Drewes et al.'s col. 6 lines 13-16) retain the sensor assembly stress free).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate sensor assembly is formed entirely ceramic materials to remain the virtually stress at high temperature as taught by Drewes et al.'s into the system of Lawrence et al. because matching thermal expansion coefficients of different materials to reduce drift is routine in the art of sensors operation in high temperature (See also Ko (6,465,271) which applied to reject the claims in previous Office action).

With respect to claims 5, 10, Lawrence et al. discloses a first electrically conductive bridge connected to the electrode (4) and connectable to the conductor of a transmission cable; and a second electrically conductive bridge connected to the housing (2) and connectable to the conductor of a transmission cable (Col. 5 lines 26-30).

With respect to claims 6, 11, Lawrence et al. discloses every subject matter recited in the claim except for explicitly showing the first electrically conductive bridge passes through apertures provided in the housing and the second electrically conductive bridge.

Drewes et al. discloses a system similar to that of Lawrence et al. and further discloses the first electrically conductive bridge (17, 17") passes through apertures provided in the housing (1) and the second electrically conductive bridge (17, 17" on the opposite side) for the purpose of conveying the signal.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the first electrically conductive bridge passes through apertures provided in the housing and the second electrically conductive bridge as taught by Drewes et al. into the system of Lawrence et al. because have the first electrically conductive bridge passes through apertures provided in the housing and the second electrically conductive bridge is the typical way to convey the detected signal to the analyzing or monitoring circuit.

With respect to claims 7, 8, Lawrence discloses the first and the second conductive bridges (16) substantially surrounds the housing (2).

With respect to claims 14, 15, Lawrence discloses the electrode (4), shield (16), insulating layer (14) and housing (2) are bonded together (Figures 2-4).

3. Claims 9, 12, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence et al. (5,760,593) in view of Drewes et al. (6,374,680), as applied to claims 1 and 5 above, and further in view of Bailleul et al. (5,973,502).

With respect to claims 9, 12, 13, Lawrence et al. does not explicitly disclose an adaptor.

Bailleul et al. discloses an adaptor (11b) for connecting the second electrically conductive bridge (21a) to the conductor of a transmission cable (21).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the adaptor as taught by Bailleul et al. into the system of Lawrence because having adapter for connecting to the conductor is a typical way of connection cables of different sizes in the art.

Response to Arguments

4. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

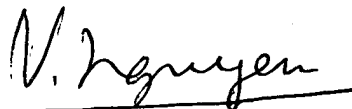
Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent Q. Nguyen whose telephone number is (571) 272-2234. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "V. Nguyen", is written over a horizontal line.

November 16, 2007

Vincent Q. Nguyen
Primary Examiner
Art Unit 2858